

Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1 (Canceled).

2 (Canceled).

3 (Canceled).

4 (Canceled).

5 (Canceled).

6 (Canceled).

1 7 (Original). An optical information recording method for recording data
2 on an optical information recording and reproducing medium having a
3 plurality of recording layers which allow recording and reproducing by
4 irradiation with a laser beam,
5 characterized in that when data recording is performed on one
6 recording layer, a recording state of the other recording layer nearer a laser
7 beam incident surface than said one recording layer is examined by using
8 recording layer management information and if data recorded and
9 unrecorded parts are mixed together in an area whose recording state is
10 examined, an area for recording data of said one recording layer is moved
11 to another area.

1 8 (Original). An optical information recording and reproducing method for
2 recording/reproducing data on and from an optical information
3 recording/reproducing medium having a plurality of recording layers
4 which allow recording and reproducing by irradiation with a laser beam,

5 characterized in that when data reproducing is performed on one
6 recording layer, a recording state of the other recording layer nearer a laser
7 beam incident surface than said one recording layer is examined by using
8 recording layer management information and if data recorded and
9 unrecorded parts are mixed together in an area whose recording state is
10 examined, data is reproduced from said one recording layer after dummy
11 data is recorded in the data unrecorded part.

1 9 (Original). An optical information recording method for recording data
2 on an optical information recording and reproducing medium having a
3 plurality of recording layers which allow recording and reproducing by
4 irradiation with a laser beam,
5 characterized in that when data recording is performed on one
6 recording layer, a recording state of the other recording layer nearer a laser
7 beam incident surface than said one recording layer is examined by using
8 recording layer management information and if data recorded and
9 unrecorded parts are mixed together in an area whose recording state is
10 examined, data is recorded on the one recording layer after dummy data is
11 recorded in said data unrecorded part.

10 (Canceled).

11 (Canceled).

12 (Canceled).

13 (Canceled).

14 (Canceled).

15 (Canceled).

1 16 (Original). An optical information recording device for recording data
2 on an optical information recording and reproducing medium having a
3 plurality of recording layers which allow recording and reproducing by
4 irradiation with a laser beam,
5 characterized by comprising at least reproducing means for
6 reproducing recording layer management information containing at least
7 information indicating recording states of the recording layers, condensing
8 means for condensing a laser beam on a recording layer on which data is
9 recorded, and laser beam power switching means for examining, when data
10 recording is performed on one recording layer by said condensing means, a
11 recording state of the other recording layer nearer a laser beam incident
12 surface than said one recording layer by using the recording layer
13 management information reproduced by said reproducing circuit, and
14 changing setting of a laser beam output for the recording based on a
15 recording state of an area of said other recording layer stacked on an upper
16 part of an area in which the recording is performed,
17 and in that if data recorded and unrecorded parts are mixed together
18 in the area of the other recording layer stacked on the upper part of the area
19 in which the recording is performed, the area in which the recording is
20 performed by the condensing means is moved to another area.

1 17 (Original). An optical information recording and reproducing device for
2 recording or reproducing data on or from an optical information recording
3 and reproducing medium having a plurality of recording layers which
4 allow recording and reproducing by irradiation with a laser beam,
5 characterized by comprising at least reproducing means for
6 reproducing recording layer management information containing at least
7 information indicating recording states of the recording layers, condensing
8 means for condensing a laser beam on a recording layer on/from which
9 data is recorded or reproduced, and laser beam power switching means for
10 examining, when data is reproduced from one recording layer by said
11 condensing means, a recording state of the other recording layer nearer a

12 laser beam incident surface than said one recording layer by using the
13 recording layer management information reproduced by said reproducing
14 circuit, and changing setting of a laser beam output for the recording or
15 reproducing based on a recording state of an area of said other recording
16 layer stacked on an upper part of an area in which the recording or
17 reproducing is performed,
18 and in that if data recorded and unrecorded parts are mixed together
19 in the area of said other recording layer stacked on the upper part of the
20 area in which the recording or reproducing is performed, said condensing
21 means reproduces data from said one recording layer after dummy data is
22 recorded in the data unrecorded part.

1 18 (Original). An optical information recording device for recording data
2 on an optical information recording and reproducing medium having a
3 plurality of recording layers which allow recording and reproducing by
4 irradiation with a laser beam,
5 characterized by comprising at least reproducing means for
6 reproducing recording layer management information containing at least
7 information indicating recording states of the recording layers, condensing
8 means for condensing a laser beam on a recording layer on which data is
9 recorded, and laser beam power switching means for examining, when data
10 is recorded on one recording layer by said condensing means, a recording
11 state of the other recording layer nearer a laser beam incident surface than
12 said one recording layer by using the recording layer management
13 information reproduced by said reproducing means, and changing setting
14 of a laser beam output for the recording based on a recording state of an
15 area of said other recording layer stacked on an upper part of an area in
16 which the recording is performed,
17 and in that if data recorded and unrecorded parts are mixed together
18 in the area of said other recording layer stacked on the upper part of the
19 area in which the recording is performed, said condensing means records
20 data on said one recording layer after dummy data is recorded in the data

21 unrecorded part.

1 19 (Currently Amended). An optical information recording and
2 reproducing medium having a plurality of recording layers which allow
3 recording and reproducing by irradiation with a laser beam,
4 characterized in that each recording layer comprises a recording
5 area in which user data is recorded, and a recording management area in
6 which recording layer management information containing at least
7 information indicating recording states and defects of a plurality of areas
8 into which the inside of said recording area is divided is recorded, said
9 recording layer management information including target area number,
10 start address of recorded part, end address of recorded part, start address of
11 recoding inhibited part due to defect, and end address of recording
12 inhibited part due to defect,
13 and recording layer management information of one recording layer
14 is recorded in each of the recording management areas of said one
15 recording layer and one or more recording layers farther from a laser beam
16 incident surface than said one recording layer.

1 20 (Currently Amended). The optical information recording and
2 reproducing medium according to claim 19, wherein defect management
3 information indicating a defect position of said one recording layer ~~is~~
4 further includes a flag indicating defect information recorded in the
5 recording management area of each recording layer.

1 21 (Currently Amended). The optical information recording and
2 reproducing medium according to claim 20, wherein the defect
3 management information of said one recording layer is recorded in a
4 recording management area of ~~the other~~ said one or more recording ~~layer~~
5 layers.

1 22 (Currently Amended). The optical information recording and
2 reproducing medium according to claim 19, wherein a guide groove of a
3 wobbling shape is formed in at least one track of one of said plurality of
4 recording ~~layer~~ layers, and the guide groove of the wobbling shape is
5 subjected to track modulation for indicating a track address.

1 23 (New). The optical information recording and reproducing medium
2 according to claim 19, wherein the management information further
3 includes a position of a recording start time zero set as a reference on the
4 medium, a layer number, a recording start time of a recorded part, and an
5 end time of the recorded part, the recording start time and the end time
6 being referenced to said start time zero.

1 24 (New). An optical information recording and reproducing medium
2 having a plurality of recording layers which allow recording and
3 reproducing by irradiation with a laser beam,
4 characterized in that each recording layer comprises a recording
5 area in which user data is recorded, and a recording management area in
6 which recording layer management information containing at least
7 information indicating recording states and defects of a plurality of areas
8 into which the inside of said recording area is divided is recorded, said
9 management information including target area radius, start radius of
10 recorded part, end radius of recorded part, start radius of recording inhibited
11 part due to defect, and end radius of recording inhibited part due to defect,
12 and recording layer management information of one recording layer
13 is recorded in each of the recording management areas of said one
14 recording layer and one or more recording layers farther from a laser beam
15 incident surface than said one recording layer.

1 25 (New). The optical information recording and reproducing medium
2 according to claim 24, wherein defect management information indicating
3 a defect position of said one recording layer is further includes a flag

4 indicating defect information recorded in the recording management area
5 of each recording layer.

1 26 (New). The optical information recording and reproducing medium
2 according to claim 25, wherein the defect management information of said
3 one recording layer is recorded in a recording management area of said one
4 or more recording layers.